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### ITS FUNCTIONS AND SERVICES

# **Foreword**

THE Department of Agriculture exists primarily to be of service and assistance to the farmers of Alberta. It is believed that many farmers in the Province may not be fully aware of the services provided by the Department and of the many policies designed to assist them to better farming.

The object of this bulletin, therefore, is to acquaint farmers and other interested persons with the general organization of the Department, as well as with the

policies provided for their use.

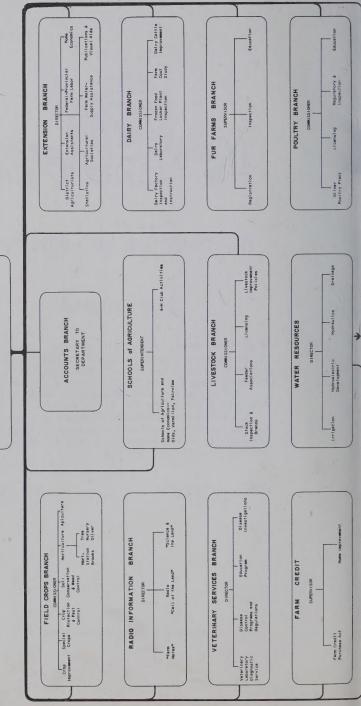
HON. L. C. HALMRAST Minister R. M. PUTNAM
Deputy Minister



# DEPARTMENT OF AGRICULTURE

DEPUTY MINISTER

MINISTER



# Water Resources Office

#### **FUNCTIONS AND SERVICES**

The basic functions and services of the Water Resources Office are:

- (1) To measure survey and assess all sources of water supply in the Province of Alberta.
- (2) Under the provisions of the Water Resources Act to license all works for the diversion of water for domestic, municipal, industrial, irrigation, water power and other purposes.
- (3) To determine if the licensees are receiving supplies of water in accord with their licenses in order that the direct and indirect investments of the licensees will be protected in perpetuity.
- (4) To investigate all drainage proposals or works whether large or small with respect to adequate outlets and any other relevant factors.
- (5) In co-operation with the Dominion Government to formulate and execute plans for hydrometric service.
- (6) In co-operation with the Dominion Government to formulate plans for water development in the drought areas of the Province.
- (7) In co-operation with the provinces of Saskatchewan and Manitoba and with the Dominion Government to formulate an equitable apportionment of waters in the Saskatchewan River basin.
- (8) To supervise all irrigation development authorized under legislation of the Government of Alberta.
- (9) To supervise all authorized drainage works under the provisions of legislation of the Government of Alberta.
- (10) To supervise all authorized hydroelectric developments in the Province of Alberta.
- (11) To license and control the drilling of wells for ground water supplies.
- (12) In co-operation with other agencies of the Government of Alberta to investigate water problems of mutual interest.
- (13) Under the authority of the Minister of Agriculture and the Executive Council of the Province of Alberta to execute any proposals concerning water control that are deemed to be in the public interest and fall within the provisions of The Water Resources Act.
- (14) To maintain and preserve in perpetuity all surveys, plans, reports and other data relating to the above functions and services.

## Extension Branch

THE primary function of the Extension Service is to provide up-to-date information on agriculture and homemaking to farm families and to encourage them to use it. To perform this function, the Branch employs over fifty-five District Agriculturists, twenty District Home Economists, some subject matter specialists and administrative personnel.



District Agriculturists are located at country points throughout the Province. Their approach to better farming practices is primarily on two bases: first, by the introduction and encouragement of projects, e.g., pure-bred sires, registered seed, pasture improvement, 4-H Clubs, etc. These projects have regard for what is considered to be the most urgent problem in the area concerned. The Department has evolved policies, most of which are administered by other Branches, which are designed to assist farmers in these specific projects. In this approach, therefore, the work of the District Agriculturist is to apply the policy to the district and to encourage farmers to make wide use of it.

Secondly, in addition to these specific projects, farmers are urged to consider the overall approach to farm management. In this approach consideration is given to the entire farm business, including the crop sequence program, the livestock program, good husbandry practices and general management. From such an effort, therefore, a balanced farming plan is prepared with the farmer.



The District Home Economists attempt to provide a similar service with respect to homemaking. Thus, they are prepared to discuss with homemakers, individually or in groups, either specific problems with respect to homemaking or a complete program including home designing or remodelling, foods and nutrition, clothing and home sewing, home management and family relationships. Since at this time the number of District Home Economists is much smaller than the number of District Agriculturists, they must necessarily spend more time with groups and have less time for visits to individuals.

The tools or methods used by all Extension field workers include short courses and public meetings; farm visits; office visits; telephone calls; letters, circulars and printed publications; and the public press. By all of these means and by demonstration and Farm Family discussion groups, these workers endeavour to promote better farming and better homemaking. Specialists in Agricultural Engineering, Farm Management, Home Designing and Clothing assist by evolving programs and providing advanced information.

In addition to these primary functions of education and inspiration, this Branch is responsible for the administration of certain general policies of the Department.



- 1. Farm Labour. Co-operating under an agreement with the Federal Department of Labour, field staff of this Branch is active in the recruitment and placement of workers on farms. In addition to District Agriculturists and District Home Economists who spend some time in this work, two labour fieldmen are permanently employed.
- 2. Agricultural Societies. Organizations of this nature have been in existence in Alberta and elsewhere for several generations, some having been incorporated before this Province was formed. One of the main projects of these Societies is the Agricultural Fair, of which 26 are now being conducted. In addition, several other projects are available to these Societies in their effort to improve agriculture. These include tillage competitions, livestock sales, seed fairs, horticultural exhibitions, farm and home improvement programs and junior club displays. In addition to these also, some Societies conduct recreational and other activities in their districts. The Department pays earnable grants to assist Societies in their work and this Branch is responsible for the supervision of Societies insofar as the Department is concerned.

- 3. **Statistics.** In collaboration with the Dominion Bureau of Statistics the Provincial Statistician and others, statistics on agriculture with special reference to Alberta are assembled and made available to the public.
- 4. **Master Farm Family Award.** This program is designed to select a family in each of five regions in the Province each year. It is required that the family be nominated by three neighbors. To be eligible for nomination, the head of the family must have farmed for at least 20 consecutive years, he must be a Canadian citizen and he must be engaged primarily in farming rather than in some other enterprise. Scoring of these families is completed by committees comprising farm people and representatives of the Department.

5. **Irrigation and Land Preparation.** — Under this policy the Department maintains a field survey staff of irrigation specialists and a number of instrument men and rodmen. In the area to be



Irrigation Field Day

served by new irrigation projects, this staff establishes levels for the preparation of land for irrigation and plots the course of field ditches on the land. A representative of this Branch serves on the S.M.R.D. Colonization M anager's Advisory Board and the District Agriculturists in this area are active in giving special service to new settlers on irrigated land.

# 6. Farm Water Supply Assistance Policy. —

This policy is designed to assist farmers to create farm water supplies by impounding run-off water in dugouts. Assistance from the Department is in

the form of a subsidy per cubic yard excavated, at a rate per cubic yard and in a maximum amount which is determined from time to time by the Government. This policy is primarily to assist in areas where it is not practicable to procure farm water supplies from wells. Headquarters of this Branch is responsible for general administration; and inspections of dugouts for payment of subsidy are made by field staff.

- 7. Names of Homes Act. This makes provision for a farmer to register a name for his farm and home and ensures to him exclusive legal right to use that name to designate his farm. The Act is intended to avoid duplication in farm names and provides that a name may not be registered which is presently reserved by a farmer in Alberta as a pedigree prefix. Applications are made to this Branch and the cost of registration is \$5.00.
- 8. Agricultural Publications. All Departmental bulletins, leaflets, farm building plans and literature of a similar nature designed for the guidance and assistance of farmers, are prepared and distributed under the administration of this Branch. Publications are distributed on request through country offices and direct from headquarters, and without cost to the farmer. University publications also are similarly distributed.
- 9. **Visual Aids.** The Branch maintains a number of motion picture and still projectors for the use of staff members at farmers' meetings. The film library, while it is the property of this Branch, is served and distributed by the Film and Photographic Branch, Department of Economic Affairs. The number of films presently available necessitates restricting their use to Departmental staff so that with the present supply it is not possible to operate a public lending library.

The Schools of Agriculture

Three Schools of Agriculture and Home Economics are operated by the Department of Agriculture at Olds, Vermilion and Fairview. Schools of Agriculture and Home Economics were first established in Alberta in 1913 for the purpose of offering vocational training in agriculture for boys and in home economics for girls. Since that time 14,986 students have attended the schools and 5,697 diplomas have been awarded.



#### School of Agriculture at Olds

The school year extends from late October to early April thus allowing rural boys and girls to secure further training at a time when farm duties are least pressing.

For the Two Year Course in Agriculture, boys must have passed their 17th birthday by December 31st of the year in which they register. For all other courses the minimum age at registration is 16 years.

Both boys and girls must have Grade IX standing but consideration will be given to older students who cannot meet this requirement. There is no upper age limit.

The regular course for both boys and girls consists of two winter sessions, but students who have 70 high school credits with "B" standing may complete the course in one winter term.

Graduates from Schools of Agriculture who wish to proceed for the degree of B.Sc. in Agriculture will be admitted to the University of Alberta on presentation of a School of Agriculture Diploma and an official transcript indicating a standing of "B" or higher in Literature 20, Language 20, Social Studies 20, one of French 20, German 20, or Latin 20, and an average of at least 60% in Mathematics 30, Chemistry 30, and Physics 30. The degree course requires four years at the University.

The degree of Bachelor of Household Economics has been discontinued at the University of Alberta and all applicants to the School of Home Economics at the University for the degree of Bachelor of Science in Home Economics will be obliged to meet regular matriculation requirements.



Vermilion School of Agriculture

Subjects in the agricultural courses include: **Field Husbandry:** soils; fertilizers; culture of grain, forage, fodder and root crops; field management; rotations and cropping systems. **Animal Husbandry:** importance of livestock; breeds and breeding; feeds and feeding; care and management; diseases and sanitation. **Farm Mechanics:** carpentry; building plans; blacksmithing; welding; care and repair of farm machinery and motors. **Farm Management:** types of farming; farm lay-out; investment returns; land tenure partnerships; farm bookkeeping. **Other Subjects:** Horticulture; Dairying; Poultry, Economics and Co-operation; Botany; Entomology; Public Speaking, etc.

Subjects studied in home economics include: **Foods:** preparation of all types of foods; menu making; quantity cookery; freezing and canning; study of foods in relation to health. **Clothing:** from simple projects to tailored garments; use and care of sewing machines; study and use of textiles; selection of clothing. **Home Management:** budgeting and buying for the home; organization of work; home decoration; instruction in handicrafts. **Typing and Record Keeping:** instruction in typing and bookkeeping as an aid to suitable employment. **Other Subjects:** Horticulture; Poultry; Public Speaking; etc.

A number of important changes in courses will be made effective in the term opening October 28th, 1959. Opportunities for specialization, electives, and increased emphasis on farm and home management are all included in course changes at Alberta Schools of Agriculture and Home Economics.

Saturday morning classes will all be devoted to advanced work in the major fields of study and each second year and two-in-one student will be required to select a field of specialization.

The increased emphasis on Farm Management is in line with modern developments and results in more than doubling the time devoted to the course as recently as three years ago. The increased time will allow for more attention to farm records, farm planning and marketing.

Another change, related to electives is that students who have achieved certain established standards in English, Mathematics and Science in high school will not be required to take these subjects and will be permitted to choose other subjects instead.

The Schools are residential with board and room available in modern dormitories at \$40.00 a month. There are no tuition fees for Alberta students. Under the supervision of the staff, the students are encouraged to take part in a wide variety of extra-curricular activities. These include the students' council, year book, school paper, sports, dances, plays, school orchestra, glee club, etc.

## 4-H Clubs

The 4-H Club Staff of the Department of Agriculture is responsible for the over all administration and supervision of the 4-H Club program in the province. Individual clubs are organized and directed by the district agriculturists and district home economics working through local voluntary club leaders.



Provincial 4-H Club Week at a School of Agriculture

The 4-H club movement has the following major objectives:

- 1. The education of rural youth in agriculture and homemaking.
- 2. Training in citizenship as a means of interesting club members in home and community life and to develop those qualities of character that are needed for leadership.

Membership is open to farm boys and girls between the ages of 12 and 21 years and clubs may be formed providing there are the required number of eligible young people wishing to carry the same project. In 1958 there were 6,800 members active in 460 clubs in the province.

Clubs are organized on a project basis one project only being permitted in any one club. The following projects are now offered:

For boys and girls—beef feeding, beef breeding, sheep, swine, dairy, poultry, wheat, oats, barley, forage, potato.

For girls only—clothing, foods, garden, home decoration.

The motto of 4-H is "Learn to Do by Doing". This is a fundamental principal observed in all phases of the program. Members learn to conduct business meetings through actively participating in them. Similarily they gain a knowledge of the project by personally meeting the requirements of it.

\*Study material is provided to assist members to get the most out of whatever project they are carrying.

The club program consists of regular monthly meetings, rallies, camps, tours, social and recreational activities. Clubs now draw up a balanced program for the year and include in their regular meetings a systematic study of the project involved through short talks,

debates, discussions, demonstrations, guest speakers, films and slides. \*Besides this, as secondary project work many clubs build floats, thematic displays, care for varietal test plots, assist in community activities, etc. The club year culminates in an Achievement Day at which members exhibit and demonstrate something of their year's work.

Provincial 4-H activities include among other things club weeks at the School of Agriculture for efficiency winners from all clubs, Provincial Eliminations. a Provincial Plot Competition, Provincial 4-H Dairy Show, Provincial Junior Seed Fair. The two major provincial awards for outstanding accomplishment are: (1) a trip to National Club Week in Toronto for 14 delegates; (2) a trip to the Montana State Congress for 4 delegates.



Dress Review
in 4-H
Homemaking
Project

**4-H** is a Department of Agriculture program but much assistance is received on a provincial basis from large commercial and cooperative organizations and breed associations. Locally also much support is given by boards of trade, service clubs, agricultural societies, Exhibitions and community minded individuals.

Besides the direction of the 4-H program, the Department of Agriculture 4-H staff also carries other junior activities. These include camps, rallies, etc. which provide opportunities for all farm young people even though they may not be members of 4-H clubs.

A 4-H

Beef Club

Achievement Day



# Field Crops Branch

This Branch of the Department is responsible for providing services to those engaged in crop production, horticulture and apiculture. For administrative purposes there are five principal divisions within the Branch, namely, Crop Production and Improvement; Soil Conservation and Weed Control; Crop Protection and Pest Control; Horticulture and Apiculture. Each is administered by a Supervisor, who is responsible to the Commissioner. In addition the Branch is charged with the operation of the Horticultural Station at Brooks and the Tree Nursery at Oliver.

The Branch, through the Supervisors and Fieldmen, administers legislation relative to crop production, develops and implements policies to guide the course of production and endeavors to keep informed on research and experimentation applicable to production. The Supervisors serve the farmers through the Extension Branch and District Agriculturists, through Agricultural Service Boards of Municipalities or directly in case of Apiculture.

The following activities are carried on and listed under the office which provides the service.

#### CROP IMPROVEMENT

#### (1) Demonstration Policies-

Seed and fertilizers for different Projects are made available to District Agriculturists for demonstration purposes. The Projects are designed to promote the use of recommended varieties, higher yielding hay and pasture mixtures, forage seed production in suitable areas, and to acquaint the farming public with new crops and varieties.

#### (2) Alberta Crop Improvement Association

The Association, composed of representives of the Branch, participating grain and seed companies, Department of Plant Science, University of Alberta, and the Canada Department of Agriculture, promotes and distributes pedigreed seed to farmers. Distribution is made through the local elevators of the participating companies, making Registered and Certified seed available to farmers. The Field Crops Commissioner is Chairman and the Supervisor of Crop Improvement is Secretary of the Association.

#### (3) Foundation Seed Allocation Committee

The Field Crops Branch is represented on this Committee, which considers applications for Foundation Stock Seed. In this way, the limited amount of Foundation Stock Seed available, is distributed to those who are competent and equipped for the production of Elite seed, thereby guaranteeing sufficient stocks to maintain a supply of registered and certified seed to meet the needs of all farmers.

(4) Canadian Forage Seed Project—

In co-operation with the Canada Department of Agriculture, the Branch carries out the allocation of superior seed stocks to growers and supervises the production of these crops. The objective of this policy is to increase quantities of registered seed of superior forage varieties, the use of which has been limited because of a lack of seed.



Creeping Red Fescue for Seed.

#### (5) Provincial, National and International Seed and Grain Shows—

The Department, through the Field Crops Branch, encourages local Seed Shows, where samples exhibited are drawn from grain cleaned for sale or for farm use. The Branch also assists exhibitors by paying transportation costs and offering honoraria for seed grain exhibited at the Royal Winter Fair, Toronto, and the International Grain and Hay Show at Chicago. Exhibits at these two latter Shows are under the supervision of the Branch.

(6) Seed Cleaning Plants—

The Department, through this Branch, provides financial assistance, by authority of the Agricultural Service Board Act, for the construction of centralized Seed Cleaning Plants. Farmers are required to contribute share capital to at least  $\frac{1}{3}$  of the total cost. Management and operation are by a Board of Directors representing shareholders, Municipal officials and the Department of Agriculture.

(7) Alberta Crop Production Board—

This is a Board appointed by the Minister of Agriculture, consisting of representatives of the Field Crops Branch, Dominion Government Production Service, University of Alberta, Experimental Farms and the Alberta Branch of the Canadian Seed Growers' Association. The Board is charged with the responsibility of making representations to the Minister with respect to crop improvement policies and projects. Programs pertaining to crop production, crop protection and improvement are referred to this Board for its consideration.

#### (a) Cereal Varietal Zonation Committee-

This is a Commtitee of the Production Board which reports annually in regard to the zonation of the province with respect to varieties of cereals. The purpose of this Committee is to provide information which will guide officials in recommending suitable varieties of cereals for the various soil climatic zones which have been established through the Province. The Field Crops Branch publishes and distributes annually a circular outlining the recommendations of this Committee.

#### (b) Forage Crops Advisory Committee—

This Committee meets annually and advises the Production Board of the suitability of new crops, as well as the recommendation of suitable forage mixtures. This Committee has representation on the Western Forage Committee, which reviews the findings of experimental agencies in the Prairie Provinces, and promotes the use of knowledge so gained.

#### (8) Seed Dealers Act—

The Seed Dealers Act provides for the licensing and bonding of all seed dealers within the province who purchase seed from producers. The purpose of the Act is to provide protection to producers of seed through the posting of surety bonds by the seed dealer.

#### (9) Seed Control Areas Act-

This Act provides the means by which producers may establish pure seed areas. Under the terms of a Seed Control Area Act, the production of undesirable varieties or non-pedigree grades may be prohibited, thereby reducing the possibility of contamination in cross-pollinated crops. The selection of kinds and varieties to be grown is made by the producers themselves, in committee with the assistance and guidance of the Field Crops Branch.

#### (10) Agricultural Relief Advances Act-

The Act provides authority for the Provincial Treasurer to guarantee loans made to a Municipal District, or to the Minister of Municipal Affairs in the case of Improvement Districts, where such loans are made for the purpose of providing advances to necessitous farmers for seed, feed, or fuel oil.

#### WEED CONTROL AND SOIL CONSERVATION

The Soils and Weed Control Division of the Field Crops Branch in co-operation with municipalities promotes better land use and assists farmers with soil and weed problems. This is accomplished by: demonstrations, assistance policies, Agricultural Service Board projects, education and extension. Weed Control:

#### (a) Supervision:

Provincial Weed Supervisors assist municipalities in conducting and co-ordinating weed control programs, which in most instances are first approved by the Agricultural Service Board of the Municipality. In Improvement Districts weed control is the direct responsibility of the Branch.

On unoccupied Crown land the grass and legume seed is provided to plant weed infested areas. Chemicals for weed control are also supplied in emergency cases, or where planting of forage seed is not practical. Lease arrangements for the use of the land must

first be made by the farmer through the Department of Lands and Forests.

#### (b) Distribution of Weed Control Chemicals:

Soil sterilants which have proven their effectiveness on persistent perennial weeds are stocked by this Branch and distributed at cost to farmers through municipalities. By agreements, as provided under the Agricultural Service Board Act, many municipalities are sharing equally with the Department the cost of the sterilants where they are used in controlling persistent perennials on private land (in special cases) and road allowances.

#### (c) Roadside Seeding:

Through the Agricultural Service Board this Branch supplies forage seed to municipalities for seeding down four miles of back-sloped road per division. This policy is designed to encourage the back-sloping and seeding of roads to control weeds and prevent erosion.

Shoulders and ditches of all newly constructed highways are seeded to grass as soon as construction is completed.

#### (d) Weed Control Trials:

Extensive weed control trials using cultural and chemical means of control are set up in various areas throughout the province. Field Days and tours are held so farmers may evaluate methods and materials used.

#### SOIL CONSERVATION

The proper use and conservation of soil is demonstrated and farmers are encouraged to adopt measures that will return maximum yields with minimum soil losses.

#### (a) Soil Improvement Demonstrations:

Forage seed and fertilizer are supplied to farmers at one-half cost (on a limited acreage) who will co-operate in demonstrating soil improvement practices.

#### (b) Fertilizer Trials and Demonstrations:

These are conducted throughout the province to determine the most suitable kinds and the rates of application for different zones and different crops. Information so obtained is published in the bulletin "Fertilizer Recommendations for Alberta". This bulletin is revised yearly.

The work is done in conjunction with members of the Alberta Advisory Fertilizer Committee.

#### (c) Conserving Soil Fibre:

Cultural methods for conserving soil fibre are constantly urged by all extension methods.

#### (d) Trees and Shrubs:

Field shelterbelts for reducing wind erosion losses are encouraged; trees and shrubs are provided to farmers from Provincial nurseries.

#### (e) Gully Control and Water Courses:

Policies to supply forage seed to grass down drainage channels to prevent further water erosion are available to farmers encountering such problems. (f) Save The Soil Campaigns:

This program has been developed to enable local organizations to conduct competitions amongst farmers in the communities. Certificates of merit are isued to those who obtain scores of 80% or better.

#### (g) Contour farming is encouraged where feasible.

#### AGRICULTURAL SERVICE BOARDS

The Department of Agriculture by authority of the Agricultural Service Board Act may enter into an agreement with municipalities to assist them in conducting soil conservation and weed control programs, as well as other Agricultural improvement programs. Boards are now formed in 49 municipalities in Alberta and are administered by the Soils and Weed Control Division of the Field Crops Branch. Grants are available through this agreement to the municipalities in carrying out the many programs undertaken by the Boards.

#### CROP PROTECTION AND PEST CONTROL SERVICE

This division of the Field Crops Branch implements policies and projects for the control of insects, crop diseases and other pests that are of economic importance to agriculture. Many of its services are made possible through the administration of the Agricultural Pests Act. Under this legislation, grasshoppers, bacterial ringrot of potatoes, warble flies, coyotes and rats are specifically named as pests and thus the expenditure of public funds for their control or eradication is possible. In additon various other services are provided for the control of pests which periodically become important. Field demonstrations and trials are conducted on new or improved control measures.

(1) Grasshopper Control:

Early each year the provincial policy on grasshopper control is distributed to Municipalities, Agricultural Service Boards and District Agriculturists. In co-operation with Science Service Laboratories, a grasshopper forecast map is printed and distributed. Farmers are warned of possible outbreaks and preparations are made to protect crops. Poison bait has been replaced by insecticide sprays and dusts. These are bought and stocked by the Department at strategic points. Insecticides are sold to farmers below cost with the Municipalities mainly responsible for distribution.

(2) Bacterial Ringrot:

Five of the main potato producing districts in the province are named as Pest Areas for the control of Bacterial Ringrot. These areas are Edmonton, Calgary, Drumheller, Brooks and Lethbridge. All growers with commercial crops in these areas are required to obtain a potato planting permit. Prior to digging all commercial and seed fields are inspected. Infected stocks are handled and sold in such ways as to keep this disease at a minimum. A disinfection spraying service is available at low cost to growers.

#### (3) Warble Flies:

Campaigns for warble control are most successful on a community basis. Cattle owners are encouraged by demonstrations and publicity. Numerous municipal, spraying associations and privately

owned sprayers are doing good work. A grant is available to Municipalities for the purchase of sprayers to combat warbles, shelterbelt insects and other insect problems.

(4) Coyote Control:

Under this policy, poisons in the forms of strychnine pellets and cyanide guns are provided for use on farms. District Agriculturists and Municipal pest officers supervise the program at the district level, distribute necessary material and ensure the safe and proper use of poison. In addition, Branch officers prepare "1080" baits for use in sparsely settled areas. In Improvement Districts some 10 pest officers are employed on coyote control. The objective of the policy is not to exterminate coyotes but to control them wherever they become a menace to livestock and poultry.

#### (5) Rat Control:

Since Norway rats invaded Alberta in 1950, a campaign has been in effect to keep them out of the province. A grant is available to Saskatchewan border municipalities for the salary and expenses of pest control officers. Eight provincial and municipal officers make farm-to-farm checks and assist residents in control measures. Effective poison baits are supplied free and every person is required to control rats on his premises. Over the years, the campaign has succeeded in keeping the rats confined to a narrow strip along the Saskatchewan border.

**(6)** The Pest Control Advisory Committee was organized in 1957, with members from the Canada Department of Agriculture, the University and the Department. Its purpose is to review pest problems and to advise the Department.

In 1958, the responsibility for magpie control in the settled areas of the province was transferred to this division from the Department of Lands and Forests. Extensive trials have been conducted to develop a safe and effective method of poisoning magpies during the winter season.

Pest problems are considered as they appear. During 1958, extensive work was done on pocket gopher control on a field basis.

#### HORTICULTURE

Tree Planting:

The Department of Agriculture maintains two tree nurseries, located at Oliver and Brooks. Shelterbelt trees are produced at these Stations for free distribution to Alberta farmers for windbreak purposes. To be eligible for these trees, the land to be planted to trees must be summerfallowed at least one year prior to planting. Caragana, Ash, Elm, and Manitoba Maple are available in unlimited quantities. Limited numbers of Spruce, Pine, Larch, Poplar and Willow can also be obtained. To ensure obtaining the varieties and numbers of trees needed, they should be ordered one year in advance of planting. The trees are supplied free of charge, the applicant paying only the shipping charges.

#### Horticultural Advisory Board:

This Board, appointed by the Minister of Agriculture, consists of representatives of the Field Crops Branch, University of Alberta,

Experimental Farms Service, the Science Service of the Federal Department of Agriculture and Canadian Nurserymen's Association. This Board is charged with the responsibility of recommending to the Minister with respect to all matters pertaining to horticulture.

#### **Potato Improvement Committee:**

This is a sub-committee of the Horticultural Advisory Board, appointed for the purpose of giving special attention to the improvement of potatoes as a field and garden crop.

#### HORTICULTURAL STATION—BROOKS

The Horticultural Station is located approximately 3 miles east of Brooks on the No. 1 highway. There are approximately 300 acres of irrigable land on the farm which ultimately will be used for horticultural purposes.

Many kinds and varieties of trees, fruits, vegetables and ornamentals are grown. When particular kinds and varieties are found suitable for Alberta conditions they are either multiplied for farm use or released to Commercial Nurseries for increase and general distribution. Numerous vegetable kinds and varieties are tested to determine their suitability as "green vegetables" or "for processing by canning and freezing."

The Station provides trees and shrubs for Annual distribution to farmers for shelterbelts around their buildings, across their fields or for planting along roadsides.

The winter hardiness of fruit trees and bush fruits is of particular importance to Alberta and work at the Station is directed towards selecting these hardy stocks for increase purposes.

#### APICULTURE

Approximately 50,000 colonies of honeybees are operated annually in Alberta. This Division administers the Bee Diseases Act. Honeybees are susceptible to certain diseases which are a menace to individual beekeepers and the industry generally.

Permits are required for the sale or movement of used bee equipment. This equipment is inspected by authorized bee inspectors and such permits issued.

Beekeepers and apiary sites are registered annually to assist inspectors to locate apiaries in their respective districts. Most large beekeeping areas are supplied with a qualified inspector employed on a part time basis by this Division. These inspectors inspect colonies for disease, and assist in educating beekeepers in the control of disease.

#### Laboratory Service:

The only positive method of identifying disease is by microscopic examination of the suspected material. This division provides such service to beekeepers.

Honey is required by the Alberta Honey Grading Regulations to be marked according to grade and class. Honey is classified by a standard Dominion Honey Classifier. One of the important factors in determining grade is moisture. Moisture content is determined either by use of a refractometer or hydrometer. This service is provided by the Division.

#### **Extension Work:**

A considerable amount of educational work is done. Bulletins and leaflets are published on various phases of the industry. Technical assistance is given to apiarists and honey packing firms. Investigations are conducted on methods of management of colonies, and on processing equipment for honey extracting plants.

## Live Stock Branch

The Live Stock Branch of the Provincial Department of Agriculture supervises and directs the live stock development and improvement work undertaken by the Department, and administers legislation dealing with the control of live stock production, movement and marketing. The work carried out may be classified under two main headings:

- 1. Breed promotion and general activity to improve quality of live stock by improved breeding, feeding and management practices. This is largely carried out by:
- (a) the operation of Policies to encourage greater use of purebred sires.
- (b) close co-operation with 4-H live stock club activities and exhibitions,
- (c) extension and publicity through the District Agriculturist offices and direct extension by live stock specialists through meetings, short courses, and farm visits.
- 2. Administration of Acts governing the commercial production and marketing of live stock. Under this heading comes the registration of brands and carrying out of brand inspections, also the supervision of Feeder Associations, pure-bred sire areas, pound districts, live stock dealers, and the live stock exhibit to the Toronto Royal Winter Fair.

The Horned Cattle Act, under which dealers are required to deduct \$2.00 per head from producers' settlement for each head of horned cattle marketed, and deposit such deduction with the Department of Agriculture for the purpose of live stock improvement, is also administered by this Branch. In most cases the interpretation of horned cattle and the collection of funds is done by brand inspectors.

# LIVE STOCK POLICIES AT PRESENT IN EFFECT INCLUDE: Cattle Improvement Policy

#### "Section A"

Under this Policy bona fide farmers other than pure bred breeders may receive assistance in the purchase of pure bred bulls of beef and dairy breeds to the following extent:

- (a) On bulls ordered directly through the Department; 20 percent of the purchase price to a maximum of \$75, plus transportation to the applicants nearest shipping point.
- (b) On bulls selected direct from a breeder in the applicant's district; 20 percent of the purchase price to a maximum of \$75, after the application has been made through the local District Agriculturist and inspection has been made by a member of the livestock branch, before the bull is moved from the breeder's farm.

#### "Section B"

Provides for approval of certain contributor bull sales. Bulls are approved by a selection committee, eligible buyers purchase

the bull of their choice and after making full settlement, make application to the Department for a rebate in the amount of 20 percent of the purchase price to a maximum of \$75. The management of a contributor sale must apply to come under this policy thirty days before the date of sale. Each eligible applicant may receive assistance under either one or both of these sections on a total of two bulls only, dating from January 1st, 1958.

#### Loan of Dehorners

Keystone dehorners. Barnes yearling dehorners, and in some cases calf dehorners are placed at all District Agriculturist offices and are available on loan to farmers in each district.

#### Dairy Heifer Calf Policy

This policy provides for collection and prepaid shipment of suitable dairy calves from the Edmonton milk shed area to properly organized 4H Dairy Calf Clubs.

#### **Artificial Insemination Policy**

The Department will assist in organization of artificial insemination units organized in areas where volume of cows indicates economical operation, and will pay the cost of semen in such unit for one year providing the organization is set up as a co-operative association; has a minimum sign-up of 1,200 cows in an area of approximately twenty miles radius; is prepared to hire a qualified technician and set the service fee at a level that will carry the full cost of operation.



Holstein bull used at Olds artificial breeding centre.

#### Live Stock Listing Bureau

Breeders and farmers who are not eligible to obtain sires or female breeding stock under any of the assistance policies may obtain same through the Live Stock Listing Bureau. Branch personnel will locate, purchase and arrange shipment of animals for applicants, but in this case the applicant pays the full purchase price and any necessary transportation charges.

#### The Brand Act

The registration of brands is conducted by the Brand Recorder. Brands are available for cattle, horses, sheep, poultry and fox. A brand is registered for four years at a cost of \$2.00, and is renewable each four-year period for \$1.00. Brand transfers from one holder to another can be made at a cost of \$2.00.



An example of bad branding, possibly from the use of acid.

#### The Stock Inspection Act

Brand inspection is carried out on all stock marketed within, or shipped out of, the Province. Brand inspectors are maintained at Edmonton, Calgary, Lethbridge, Medicine Hat, Pincher Creek, Red Deer, and Lloydminster. Each member of the R.C.M. Police is a brand inspector and Winnipeg inspections are carried out by Saskatchewan Government Inspectors.

#### Feeder Associations

The Feeder Association Guarantee Act provides credit up to \$200,000 for an association of feeders to feed cattle or sheep. Associations are organized under the co-operative Association Act and operate under regulations prescribed by the Minister of Agriculture.

#### Pure-Bred Sire Areas

The Pure-Bred Sire Area Act provides that the Minister may declare a Municipality or Improvement District to be a Pure-Bred Sire Area after two-thirds of the resident ratepayers of the area in question have petitioned for such area. After the declaration is made the Act provides penalties for anyone in the area owning a grade sire of the class of animals named in the order.

#### **Improvement Districts Stray Animals Act**

The Improvement District Stray Animals Act provides for setting up pound districts in areas of not less than a Township and provides for the manner in which animals shall be impounded and cleared from the pound. Persons interested in establishing a pound district in an Improvement District should apply to this Branch and petition forms and information will be forwarded.

#### Live Stock Dealers

All Live Stock Dealers are required to be licensed and bonded under The Alberta Live Stock and Live Stock Products Act. All dealers other than farmers who buy live stock in the regular course of their farming operations should obtain a dealer's license before starting to conduct such business.

#### **Wool Dealers**

All wool warehouses, wool buyers and wool collectors are required to be licensed each year.

#### Live Stock Auction Markets and Buying Stations

Certain classes of these markets are required to be licensed and meet certain construction and inspection requirements. Before starting such operation the operator should contact the Department for further information.

#### **Butchers and Locker Operators**

All butchers and locker plant operators who handle meat other than that purchased from packing plants are required to be licensed under authority of The Stock Inspection Act.



#### Royal Winter Fair Exhibit

This Branch makes arrangements for, and coordinates all activities in, selection, assembling and shipping of the Alberta Live Stock Exhibit to the Toronto Royal Winter Fair. This Department pays 25% of the freight and all the cost for hay, grain, bran and salt required from the time stock is assembled for shipment until returned to the assembly points. The Federal Department of Agriculture pays 75% of the freight cost. The Alberta shipment over the past few years has averaged about twelve carloads of stock per year, contributed by about fifty different exhibitors.

#### Sheep and Swine Improvement Policies

Both of these policies are divided into Sections "A" and "B". Section A provides assistance in the purchase of boars and rams purchased on direct order to the Department. Section B provides for rebate of a portion of the purchase price on boars and rams purchased through contributor sales where certain stipulations are made regarding health and quality inspections.

#### Swine

Policy A:

Assistance is equal to ten dollars on each boar costing \$50 or more, and five dollars on each boar costing less than \$50; plus transportation to the applicant's shipping point.

Policy B:

Assistance is on the same basis as above but no transportation is paid. Under each or both sections an applicant is eligible for assistance on one boar only, every other year.

Advanced Registry Sow Policy

The Department pays a bonus to owners of sows which qualify under Advanced Registry tests, after the herd has passed a veterinary inspection for freedom from disease and adequate sanitary standards.

## Sheep

Policy A:

Assistance in the amount of \$12 for each ram grading A or Breeder grade, and \$8 for each ram grading B or Commercial grade, plus transportation to the applicant's nearest shipping point. Policy B:

Rebates on purchase price of amounts listed for grade A and grade B rams purchased through approved contributor sales. Assistance under ram policies A and B is available to bona fide farmers of Alberta who are not pure bred sheep breeders. An eligible applicant may receive assistance on a maximum of two rams every other year.

# Dairy Branch

This Branch of the Department of Agriculture promotes and directs the development of dairying in Alberta through policies of licensing, inspection and education. Three separate pieces of Legislation known as, "The Dairymen's Act", "The Frozen Food Locker Act", and the "Margarine Act", are administered by Branch personnel.

The Dairy Branch provides services to producers, manufacturers, processors and consumers of dairy products; as well as operators and renters of Frozen Food Lockers.

The following services are conducted and listed under a title designating the main divisions of the Branch.

#### GENERAL SERVICES

The issuing of annual licenses to qualified graders and testers of milk and cream, to dairy manufacturing plants and to frozen food locker plants which meet prescribed standards is a function of the Edmonton Office. The collection and dissemination of statistical data on the production and stocks of dairy products, is also a regular branch service. Other services include; the preparation of circulars, bulletins and reports; addressing meetings, field days and short courses; judging dairy shows and 4-H Dairy Calf Club achievement days and the selection of dairy stock under livestock policies.

#### PRODUCTION SERVICES

#### Cow Testing and Dairy Herd Improvement

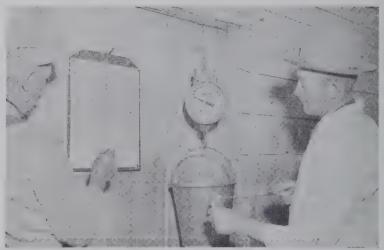
The Herd Improvement Division provides a service of recording milk and butterfat for individual cows. This service was established for grade herds but is available to all dairy herd owners in Alberta.

Milk weights are recorded by the herd owner and samples lifted once a month. Milk samples are tested for butterfat content by Branch personnel at testing centres located at Fairview Edmonton, Ponoka, Red Deer, Calgary and Lethbridge.

Butterfat production per cow is calculated and forwarded to herd owners each month.

Cows qualifying with the necessary production are issued a certificate or statement at the end of each lactation period showing the amount of milk and butterfat produced. A summary of the production for each herd is provided annually.

Herd improvement records provide most useful information for herd owners attempting to improve feeding, breeding and management practices.



Milk samples from cows on the Cow Testing Service are taken each month and tested for butterfat.

#### Mastitis Control Program

Dairy producers who agree to treatment and control of mastitis under the direction of a qualified veterinarian can secure detailed information on the type and amount of infection in each milking quarter. Samples are submitted to the laboratory and provide information necessary for the treatment and control of this disease which costs the dairy herd owners an estimated \$2,000,000 annually

# LABORATORY SERVICES Mould and Yeast Counts

As a measure of creamery sanitation the mould and yeast count has been used for many years. Samples of creamery butter are lifted by inspectors and forwarded to the laboratory for analysis. As a result of these tests, mould has been eliminated from Alberta creamery butter, markets have been widened and returns to the producer have increased.



Dairy Inspectors make frequent checks on licensed graders to assure farmers of proper weights, grades and tests for milk and cream.

#### Milk Plant Control

To assist processors of fluid milk to improve quality and increase milk consumption, which in turn will provide producers with a more remunerative market, the dairy branch laboratory offers a testing service. Properly iced milk samples are forwarded regularly by inspectors to the laboratory where bacteriological and chemical tests provide useful information to both the plant and regulatory officers.

#### Cheese Starter Service

The dairy laboratory supplies a pure active culture to all cheese factories every second week. This service is designed to improve cheese quality and through more attractive markets to improve the returns to producers of cheese milk.

# INSPECTION AND INSTRUCTION Dairy Plant Inspection

Eleven dairy inspectors located in various districts throughout the province provide a service to all dairy manufacturing and processing plants together with frozen food locker plants.

The checking of grades, tests, weights and payment records for milk and cream is required by regulation and forms an important part of the inspectors duties. Plant sanitation together with proper packaging and labelling complete the inspection service.



Skilled laboratory technicians supply the dairy industry with valuable information.



Business records are essential to good farming.

#### Frozen Food Locker Plants

The same inspectors covering dairy plants make inspections at all frozen food locker plants. Sanitation of equipment and plant are carefully considered. Temperatures in all rooms including the maximum reached in the locker room from the time of the last inspection are checked carefully. The wrapping and labelling of all food placed in lockers is also checked.

#### **Instruction Services**

Of greater importance than law enforcement is the instruction work accomplished by each inspector. These men are qualified and offer instruction in the most

approved methods of manufacturing and processing dairy products. Advice is given on composition control which results in economic operation and ability to pay producers top prices for milk and cream.

The inspectors, under the direction of a supervisor who is thoroughly skilled in locker plant operation, offer advice on processing, wrapping, sharp freezing and storing frozen foods. As a result of this service locker patrons are assured of receiving their products out of storage properly identified and in first class condition.

#### **FARM COST STUDIES**

The Farm Cost Studies Division conducts economic studies in various areas of the province and for various types of farms. Fluid milk studies have continued since 1939. The findings on cost of production with related data for four of the major milk sheds is made available each year. This information serves as a guide to the Board of Public Utility Commissioners in the price setting of milk to the producer. Two irrigation studies are now underway, one on specialty crop farms and the other on non-specialty crop farms. In the specialty crop group, data costings are being studied for canning peas, canning corn and sugar beets as well as the operation of the total farm. The first five years study of some fifty mixed farms in central Alberta has been reported in bulletin form. Explanation and interpretation of this data is made available to the Extension Service.

Other information provided from the analysis of the records studied includes an income statement for the total farm and costing of the main enterprise on each farm. This provides the means for an efficiency rating on at least six of the major management factors where averages have been worked out and indexed to serve as bench marks for appraisal. These include livestock production, crop yields, labour use, capital return, size of business and combination of enterprises. This information makes it possible to assess the weak and strong points of farm business management.

# Poultry Branch

At the present time the Poultry Branch staff consist of a Poultry Commissioner, Poultry Supervisor, and six inspectors. The province is divided into six districts with an inspector in charge of each district.

#### General Services

The duties of the Poultry Branch staff consist of the administration and supervision of the flock approval and turkey banding policies; flock reinspections; service calls; culling and caponizing demonstrations; meetings; short courses; judging of poultry shows, etc. Assistance is also given to the District Agriculturists in organizing and supervising the 4-H Poultry Clubs.

#### Flock Approval and Turkey Banding Policies

All hatcheries in Alberta operate under hatchery approval, which necessitates the culling and blood testing of all flocks supplying eggs to the hatcheries. The method of testing used for this work is the Whole Blood Agglutination Test, which is recognized as official across Canada.



Pullorum testing

Under this program approximately 1,000 poultry flocks, containing 370,000 birds, and 40 turkey flocks, containing 29,000 breeding turkeys, are inspected and blood tested annually. To assist with this work sixteen temporary inspectors are appointed each year for a four-month period.

**Provincial Poultry Plant** 

The Provincial Poultry Plant at Oliver, consisting of fifty-three acres, is operated as a Random Sample Test Station. The Random Sample Test simply involves the bringing together of samples of different commercial stocks and testing these stocks under uniform environmental conditions. Any differences which show up may be attributed to the genetic make-up of the bird rather than to differences in feeding and care. The factors tested are those that add up in the end to the net profit per bird for the poultryman.



Dealers in Poultry and Poultry Products

All hatchery operators and poultry and egg wholesalers are licensed. Approximately 50 commercial hatcheries, 143 egg grading stations, and 25 poultry processing stations operate in the province. All dealers in poultry and poultry products and commercial hatcherymen operating in the Province of Alberta must be bonded.

#### Legislation and Regulations

The following is a list of the regulations administered by the Poultry Branch under the Alberta Live Stock and Live Stock Products Act:

"Regulations Respecting the Grading, Purchase and Sale of Eggs."

"Regulations Respecting the Production and Sale of Chicks."

"Regulations Respecting the Licensing and Bonding of Dealers in Poultry and Poultry Products."

Regulations Respecting the Purchase, Grading and Sale of Dressed and Eviscerated Poultry.

# Radio and Information Branch

The aim of the Radio and Information Branch is to provide seasonal and up-to-the-minute information on a variety of topics of use and interest to Alberta Farm families. Both the spoken and written word are employed, the first through the medium of radio and the second by weekly releases.



#### Radio

'Call of the Land", a 10 minute radio broadcast, is aired at noontime daily over ten Alberta radio stations from Grande Prairie to Medicine Hat. The programs contain timely material of interest to rural Alberta with particular emphasis on agricultural developments and recommendations. Portable tape recording equipment is used continually to obtain on-the-spot material from experimental stations, farm meetings and farmers in various parts of the province. Short topical reports or commentaries from agricultural specialists are recorded and distributed regularly from this branch to all radio stations in the province. Service to commercial farm radio directors is given particular emphasis. Tapes are also exchanged with farm radio editors in other parts of Canada and the United States to provide views of national and international scope.



On the Farm

Weekly Releases

Two publications, "Farm Notes" and "Science and the Land", are released weekly to press and radio, to federal, provincial and municipal officials, and to libraries, commercial companies, universities and various individuals associated with agriculture.

In Farm Notes is provided a variety of timely and informative articles on agriculture and home economics, the information for which is obtained chiefly from specialists of the Alberta Department of Agriculture. Science and the Land deals with progress and results of agricultural research as it affects the farmers of Alberta. This information is gathered at research centres throughout the province and made available through co-operation of the various government agencies in this field.

# Fur Farming

#### Educational:

Field Days are conducted annually at strategic points throughout the Province to provide instruction on the various problems of fur farming, and to give advice on herd improvement. Lectures and assistance in programme planning are given at local fur breeders' meetings throughout the Province. Live Animal Shows provide an opportunity for study and comparison on the many varieties of furbearers being produced.



#### Disease Control:

Diagnostic service maintained by the Provincial Veterinary Laboratory in conjunction with field work of Fur Farm Branch has been successful in keeping disease under control.

#### Personnel:

The services of a Fur Farm Supervisor are available to assist the fur farmer with such problems as genetics, selection of breeding stock, advice on feeding and ranch management, instruction on proper methods of preparing pelts for market. This is accomplished by means of correspondence, bulletins, visual aids, personal contact and visits to ranchers and local associations.



#### Office Routine:

The Fur Farm Branch issues yearly Fur Farm Licenses, prepares Export Permits for all livestock and pelts exported. It maintains a filing system for all licensed fur farmers in the Province, and prepares reports and statistics on the fur ranch industry in the Province.

# **Veterinary Services Branch**



The day is long past when "wolf in the tail" and other superstitious beliefs were accepted as the cause of diseases in live stock and poultry. Present disease diagnosis and control measures are now highly scientific and well they should be for all live stock, poultry, fur bearing animals and wildlife are subject to a large group of diseases, many of which are transmissible to man. Disease losses affect the

farmer's cash in his pockets or bank. It is estimated that diseases of bacterial, viral, parasitic and nutritional origin cause a \$30,000,000 loss annually in the Province. Even so Alberta live stock and poultry are among the healthiest in Canada. In brief, the work of the Veterinary Services Branch is to help reduce this loss and protect humans from certain live stock diseases. The value of its diagnostic and educational services, coupled with programs of disease prevention and control, was estimated to be approximately \$4,000,000.00 in 1957.

#### 1. DISEASE DIAGNOSIS -



A modern, well equipped laboratory, staffed by competent veterinary pathologists is maintained by the Department in Edmonton to carry out the highly technical work of diagnosing animal and poultry diseases. This is one of the best veterinary laboratories in Canada. Approximately 14,500 specimens were examined during 1958. These specimens were submitted by veterinarians, live stock men, poultrymen, fur ranchers, feed manufacturers, forest rangers, etc. A high percentage came from veterinarians so that the right drugs can be used in treating the disease condition, as the newer and highly effective drugs are

rather selective in the bacteria they will affect. The day of guessing is past, making a laboratory service very essential in any disease control program.

When time permits, research is carried out on a limited scale on disease problems that arise. Investigational trips are also made to areas where no practising veterinarian is available.

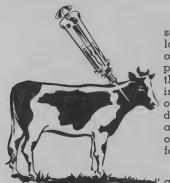
#### II. EDUCATIONAL -



In many cases, disease prevention depends on a full understanding of the disease by the owner of the herd or flock. Thus he is better able to adopt proper preventative and control measures as well as protect the health of his family and his income. Lectures in veterinary science are given at the University of Alberta and Schools of Agriculture. A large number of meetings, short courses, etc., arranged by the district agriculturists and others are addressed on disease problems. Bulletins on such diseases as shipping fever, rabies, Bang's disease, coccidiosis of poultry,

etc., are published for general distribution. Articles are written for the press and the radio, with many addresses being given over the latter.

#### III. DISEASE CONTROL PROGRAMS -



With some contagious diseases, wide-scale control programs will help reduce the losses. No program will work though with-out the co-operation of the live stock or poultrymen and that usually comes when they realize that living with disease is costing them money. Often a few dollars spent on prevention will prevent a loss of hundreds or even thousands of dollars as well as giving added protection for the health of his family. Thus he gets two dividends for the money spent on prevention.

The control programs in Alberta are

Bang's disease, mastitis, tuberculosis in poultry and hogs, rabies, and distemper in fur bearing animals.

The calfhood vaccination program has been enthusiastically accepted by the cattlemen because it has given proven satisfactory results. The number of calves vaccinated annually in Alberta has risen from 6,700 in 1947 to 304,000 in 1958. Forty-two municipalities were vaccinating every heifer calf under the Brucellosis Restricted Area Program in 1958. Over a period of a few years, the incidence of the disease should be drastically reduced, thus increasing the cattleman's income and protecting humans against undulant fever.



The rabies control program in wildlife is not just the work of this Branch. but also other Branches of the Department of Agriculture and other Departments of the Government. The aim is to reduce the wildlife predators which may act as the reservoir and source of infection to livestock and humans. Coupled with an active program by others to depopulate such predators in both agri-

cultural and forest areas, is the handling of specimens for diagnosis by the Federal Department of Agriculture and educational work to protect humans and livestock. No positive cases occured from May

1956 to May 1959.



This Branch co-operates with the Federal Department of Agriculture in establishing and financing the T.B. Restricted Area program for the eradication of tuberculosis from cattle, as the disease infects both animals and man. In 1953 the whole Province was gazetted by the Federal Department as a T.B. Restricted Area. This will be of great value to Alberta cattlemen.

Veterinary inspection of livestock at auction markets is another function of this Branch. During 1958, 387,000 cattle, hogs, sheep and horses were inspected with the diseased ones rejected as a means of preventing the spread of diseases, to the purchasers' livestock.

Due to the high incidence of tuberculosis in poultry and hogs (not transmissible to humans) an educational program was started five years ago whereby every owner of tuberculous hogs was advised of proper management practices to eliminate and control the infection.

#### **PUBLICATIONS**

Publications on many phases of agricultural production are available FREE from this Department on request. Space does not permit a complete listing here but the following topics are included:

Agricultural Engineering
Beekeeping
Dairying
Field Crops
Home Economics
Horticulture
Livestock
Pest Control
Crop Protection
Poultry
Weeds
Soil Conservation
Plans for Farm Buildings
Livestock and Poultry Diseases.

See Your
District Agriculturist or District Home Economist
or Write to
Extension Service
Department of Agriculture
Edmonton.



THANK